PIC 16F877A

This microprocessor is part of a class of microprocessors given the name PIC. It is normally used in embedded projects. It has 40 pins, which is the common number in many microprocessors. It has serial transmitter and receiver TX and RX respectively. It has 5 ports and supports SPI protocol. It uses an oscillator with frequency range between 4MHz and 40MHz. Its ports have both digital and analogue communication means. It is used mainly in robotics and automation projects as well as embedded systems design.

It is an 8 bit microcontroller which features 256 bytes of EEPROM memory. Its instruction execution rate is 200 ns, and only has 35 single word instructions which means that it is designed as RISC architecture. It is self-programming and has two comparators.

Before using this microprocessor, we need to design the basic circuit and set the oscillating frequency as well. Every port in the mp is associated with 2 registers. And the registers are all 8 bit operated. It also has an interrupt system.